

Stability: Stable.

Hazardous Decomposition or Byproducts: An impurity of toxicological concern, thionotetraethyl-pyrophosphate (*O,S*-TEPP) can be formed when diazinon containing products are exposed to trace amounts of water. This reaction will not occur when diazinon is mixed with a large amount of water.

Hazardous Polymerization: Will not occur.

Conditions to avoid: None known.

Section VI: Health Hazard Data

Routes of Exposure:

Inhalation: Yes.
Skin: Yes.
Ingestion: Yes.

Health Hazards (Acute and Chronic): Long term studies with experimental animals, conducted by Ciba-Geigy and the National Cancer Institute, have shown that diazinon is not oncogenic or carcinogenic. In other studies, diazinon did not affect the reproductive capabilities of rats over two generations, was not teratogenic in rats or rabbits, and did not cause delayed neurotoxicity. Numerous mutagenicity studies, using fully recognized and validated assay systems, have shown that diazinon is not mutagenic. No long term effects, other than symptoms associated with anti-cholinergic activity at high dose levels, occurred in any of the studies conducted with diazinon.

Toxicity of other components: A carrier in Diazinon 2D may contain a small quantity of crystalline silica. Chronic inhalation exposure to crystalline silica is known to cause silicosis and pulmonary fibrosis in humans. Experimental animals exposed to crystalline silica developed respiratory tract cancers. The carrier itself and several additional components are reported by the manufacturers to be nuisance dusts. Prolonged breathing of excessive dust may affect lung function.

Carcinogenicity:

NTP: No.
IARC Monographs: No. (Except small amount of crystalline silica)
OSHA Regulated: No.

Signs and Symptoms of Overexposure: Symptoms of cholinesterase inhibition can include headache, dizziness, blurred vision, weakness, nausea, cramps, diarrhea, discomfort in the chest, nervousness, sweating, miosis (pinpoint pupils), tearing, salivation, pulmonary edema, uncontrollable muscle twitches, convulsions, coma and loss of reflexes and sphincter control. If swallowed and aspirated into lungs, aspiration pneumonia may occur. May cause eye and skin irritation.

Acute Toxicity/Irritation Studies:

Ingestion: practically nontoxic: Oral LD₅₀ (Rat) = 8,200 mg/kg body weight
Dermal absorption: practically nontoxic: Dermal LD₅₀ (Rabbit) = >20,000 mg/kg body weight
Inhalation: slightly toxic: Inhalation LC₅₀ (Rat) = >3.0* mg/l air - 4 hours
Eye contact: moderately irritating (Rabbit)
Skin contact: minimally irritating (Rabbit)
Skin sensitization: not a sensitizer* (Guinea Pig)

*Tests conducted with a 50% diazinon formulation.

Medical Conditions Generally Aggravated by Exposure: Exposure to cholinesterase inhibitors should be restricted in persons with hemolytic anemias or pre-existing depression of cholinesterase. Persons with pre-existing respiratory disorders should use extra care in handling this product.

Emergency and First Aid Procedures: If poisoning is suspected, immediately contact a physician, the nearest hospital, or the nearest Poison Control Center. Tell the person contacted the complete product name, and the type and amount of exposure. Describe any symptoms and follow the advice given.

If swallowed: If victim is fully conscious, immediately give 1 or 2 glasses of water to drink and induce vomiting. Repeat until vomit fluid is clear. Never give anything by mouth to an unconscious person. Avoid contact with contaminated skin or clothing - wear rubber gloves. Apply artificial respiration if necessary, preferably by mechanical means - avoid mouth-to-mouth resuscitation.

If inhaled: Remove victim from contaminated area to fresh air. Apply artificial respiration if necessary.

If on skin: Wash with plenty of soap and water, including hair and under fingernails. Do not apply any medicating agents except on the advice of a physician. Remove contaminated clothing and wash before reuse.

If in eyes: Immediately rinse eyes with a large amount of running water. Hold eyelids apart to rinse the entire surface of the eye and lids. Do not apply any medicating agents except on the advice of a physician. If irritation develops or persists, call a physician immediately.

Note to physician: This product is an organophosphate (cholinesterase-inhibiting) insecticide. Atropine is antidotal for organophosphate poisoning and should be given i.v. in multiple doses as necessary until the patient is atropinized. 2-PAM may also be given provided therapy begins within 24 hours of exposure. Monitor serum and RBC cholinesterase. Morphine, theophylline, phenothiazines, reserpine, furosemide or thacrynic acid are contraindicated in organophosphate poisonings. Administer i.v. fluids cautiously if needed to correct dehydration. Based on the acute oral LD₅₀ in rats, ingestion of a fatal dose by an adult human is unlikely to occur.

Section VII: Precautions for Safe Handling and Use

Steps to be taken in case material is released or spilled: Wear chemical goggles, rubber gloves, waterproof boots, long-sleeved shirt, long pants, hat and a dust or pesticide respirator. For small spills, sweep up, keeping dust to a minimum, and place in an approved chemical container. Wash the spill area with water containing a strong detergent, absorb with pet litter or other absorbent material, sweep up and place in a chemical container. Seal container and handle in an approved manner. Flush the spill area with water to remove any residue. Do not allow washwater to contaminate water supplies.

Waste disposal method: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Do not reuse product containers. Completely empty by shaking and tapping sides and bottom to loosen clinging particles. Then dispose of empty container in a sanitary landfill, or by incineration, if allowed by State and local authorities.

Precautions for handling and storage: Harmful if swallowed. May be absorbed through skin. Avoid contamination of food or feed. Avoid inhalation of dust. May cause sensitization following repeated contact with skin in susceptible individuals. Avoid repeated contact with skin. If sensitization reactions result, consult a physician. Do not breathe dust or spray mist. Wash thoroughly after handling and before eating or smoking. Keep out of reach of children.

Other precautions: Periodically inspect stored materials.

Section VIII: Control Measures

Respiratory protection: Wear a pesticide respirator or dust mask.

Ventilation:

Local Exhaust: As required to meet TLV.

Special: Not applicable.

Mechanical: As required to meet TLV.

Other: Not applicable.

Protective Gloves: Rubber gloves.

Eye Protection: To avoid eye contact, wear chemical safety glasses or goggles.

Other protective clothing or equipment: Wear waterproof boots, long sleeved shirt, long pants and a hat. Discard heavily contaminated articles which cannot be washed, such as leather shoes. Avoid skin or eye contact.

Work/Hygienic practices: Avoid contamination of food and feed. Wash thoroughly after handling and before eating or smoking. Prevent eating, drinking, tobacco usage, and cosmetic application in areas where there is a potential for exposure to the product.

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.